

**In The Matter Of:**

***DIAMOND HEAD OIL  
SUPERFUND SITE***

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***Hearing  
July 22, 2009***

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[1] UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
PUBLIC MEETING

[2]

[3] IN RE:

[4] DIAMOND HEAD OIL SUPERFUND SITE

[5]

[6]

[7] July 22, 2009

[8] 6:00 p.m.

[9]

[10] Meeting held in the above-entitled matter at  
[11] Kearny Town Hall, 402 Kearny Avenue, Kearny,  
[12] New Jersey, before Linda A. Marino, Registered  
[13] Professional Reporter, Certified Court  
[14] Reporter, and Notary Public within and for the  
[15] State of New Jersey.

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**PRESENT:**

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[2]

[3] WANDA AYALA,  
Community Involvement Coordinator, EPA

[4]

[5] GRISELL V. DIAZ-COTTO,  
Remedial Project Manager, EPA

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**OTHER REPRESENTATIVES:**

[9]

[10] ANDREW B. JUDD,  
Hydrogeologist, CH2M Hill

[11]

[12] CHUCK NACE,  
Environmental Toxicologist, EPA  
[13] JOHN PRINCE,  
Section Chief, EPA

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[1] **MS. AYALA:** Good evening. My  
[2] name is Wanda Ayala, and I am the  
[3] Community Involvement Coordinator  
[4] assigned to the Diamond Head Oil  
[5] Superfund Site. I'm here tonight with  
[6] John Prince, our Superfund manager; with  
[7] Grisell Diaz-Cotto, who is the remedial  
[8] project manager; with Chuck Nace, who's  
[9] an EPA risk assessor; and with Andy  
[10] Judd, who's a contractor for the site.

[11] We're here to present the  
[12] proposed plan for the Diamond Head Oil  
[13] site, to discuss the preferred remedy  
[14] for the site, to go over our  
[15] recommendations for addressing the  
[16] contamination, and to discuss our  
[17] rationale for this recommendation.

[18] The public comment period for  
[19] this proposed plan started on July 14,  
[20] and it's for thirty days and we are  
[21] required to receive public comments.  
[22] All comments will be duly noted tonight  
[23] by our stenographer, Linda.

[24] It is important that everyone  
[25] here know that EPA's community

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[1] involvement program is committed to  
[2] promoting communication between the  
[3] public and the agency. Active public  
[4] involvement and transparency is crucial  
[5] to the success of any public project,  
[6] and our community involvement activities  
[7] at this site are designed to inform you,  
[8] involve you, and include you in the  
[9] decision making process since this is  
[10] your community.

[11] I'd like to thank you all for  
[12] being here tonight. And I was going to  
[13] set some ground rules, but since we have  
[14] a public of two, I ask that if you have  
[15] any questions, that you keep them until  
[16] the end of the presentation. And  
[17] whenever you ask a question, you need to  
[18] state your name because Linda needs to  
[19] record it. Federal regulations require  
[20] that we have a transcript of this  
[21] meeting to help us capture your input.

[22] Now I'd like to turn it over to  
[23] John, who will walk you through the  
[24] Superfund process and information about  
[25] the site.

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[1] MR. PRINCE: Thank you, Wanda.  
[2] MS. AYALA: You're welcome.  
[3] MR. PRINCE: So, this first slide  
[4] is a summary of the whole Superfund  
[5] process, and we can get you a cut of  
[6] it. And I'm not going to try and go  
[7] through all the pieces because we don't  
[8] need to talk about all the pieces. I'm  
[9] going to hit on some of the highlights.  
[10] And the print is too small anyway. So,  
[11] we'll not try and do any more than is  
[12] necessary.

[13] So, let me tell you a little bit  
[14] about Superfund. Congress, the U.S.  
[15] Congress, created the Superfund program  
[16] in 1980 to deal with uncontrolled  
[17] releases of hazardous substances at many  
[18] sites that have been identified in the  
[19] past, say, ten years.

[20] Prior to that, there were a  
[21] number of states, including New Jersey,  
[22] that already had kind of an  
[23] infrastructure for dealing with  
[24] hazardous waste sites, and, in fact, the  
[25] Superfund law is modeled, at least in

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[1] part, on law that already existed in New  
[2] Jersey.

[3] But that certainly wasn't the  
[4] case across the country, so Congress  
[5] wrote an unified set of instructions for  
[6] EPA to have resources, enforcement  
[7] authority, and expertise to start  
[8] addressing these sites around the  
[9] country. And then EPA ramped up to have  
[10] the skills over the following years; the  
[11] skills to actually be able to address  
[12] these sites.

[13] Superfund really has two  
[14] functions; an emergency response  
[15] function, and a long-term cleanup  
[16] component. And we come in and address  
[17] sites when we're invited. In other  
[18] words, we don't make our own decisions,  
[19] the states really say: Here's a problem  
[20] that we feel is large and complex and  
[21] maybe beyond our funding or staffing  
[22] abilities.

[23] And they invite us in.  
[24] For the Diamond Head site itself,  
[25] we did not have any emergency response

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[1] role. The site had been sitting idle  
[2] for a number of years before New Jersey  
[3] asked EPA to consider the site for  
[4] listing in 2002.  
[5] Now, having been placed on the  
[6] Superfund list doesn't mean that there  
[7] needs to be a cleanup. What it means is  
[8] that a site is — has enough unknown  
[9] components and enough contamination that  
[10] may or may not be, say, moving off of  
[11] the site for EPA to need to come and do  
[12] a study.

[13] And, so, in this long-term  
[14] cleanup phase, the first stage of our  
[15] work is kind of an exhaustive study  
[16] called the Remedial Investigation and  
[17] Feasibility Study. That looks at the  
[18] nature and extent of the contamination  
[19] and then evaluates remedial options for  
[20] cleaning it up.

[21] I just want to touch on two other  
[22] parts of the Superfund program, as  
[23] opposed to all of these parts, and that  
[24] is the enforcement component of the law  
[25] and then how we actually select a

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[1] remedy.

[2] Superfund has very strong  
[3] enforcement components that allow us to  
[4] get information to identify potentially  
[5] responsible parties, companies that  
[6] might have done spilling or that sort of  
[7] thing, and also allow us to pursue land  
[8] owners under certain circumstances to  
[9] either reimburse EPA for the cost of  
[10] cleanup or, in some cases, have parties  
[11] roped into a — some kind of an  
[12] enforceable agreement, whereby we would  
[13] oversee that party to actually perform  
[14] the work.

[15] In this case, EPA — the  
[16] companies, rather, that had created the  
[17] site in the first place were all out of  
[18] business long before we got involved,  
[19] and there really isn't an opportunity to  
[20] that we know of there. And at the  
[21] beginning of our investigation stage,  
[22] when the site was first listed, we  
[23] concluded that there really wasn't a  
[24] viable party that could step in and do  
[25] this work. So, the work's been done

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[1] with — the work is being done using  
[2] federal funds.  
[3] Now how we select a remedy, I'll  
[4] touch on that, describe some details of  
[5] the site, little of the site history,  
[6] and then we'll move on to Grisell's  
[7] portion of the presentation.  
[8] When EPA feels it has enough  
[9] information about a site to proceed to  
[10] select a remedy, Congress actually put a  
[11] check on us; we can't just go and do  
[12] that by ourselves, we need to prepare  
[13] something called a Feasibility Study,  
[14] which doesn't describe one option but  
[15] actually looks at a variety of remedial  
[16] choices for cleaning up the site.  
[17] And then we need to come and  
[18] present that into a community in a  
[19] written form — that's the proposed plan  
[20] — and at a meeting like this so that we  
[21] can get input. We then get that  
[22] feedback in writing or recorded tonight  
[23] and need to evaluate it.  
[24] And, using our preferred remedy  
[25] and that information, we make a finding,

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[1] something called a Record of Decision.  
[2] That is a written document that  
[3] memorializes the remedy for the site and  
[4] any responses to the public's input that  
[5] might have affected the remedy or, you  
[6] know, our sort of response to that.  
[7] We do that in partnership with  
[8] the State of New Jersey. They're our  
[9] sister agency in this case. So, they  
[10] have already seen and endorsed our  
[11] preferred plan for the site.  
[12] So, let me switch gears. We're  
[13] going to talk about the site itself.  
[14] I'm going to refer to some figures, and  
[15] we will start by putting ourselves on  
[16] the street map.  
[17] This is — we'll get a better  
[18] resolution in a minute, but this is  
[19] Harrison Avenue and this is Route 280  
[20] along the bottom, and we are in a  
[21] section of Kearny that is very sparsely  
[22] populated and the nearest homes are  
[23] probably about half a mile away.  
[24] This is bringing us in a little  
[25] closer. Again, here's Route 280 on the

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[1] bottom, here's Harrison Avenue, and the  
[2] activities — which I'll bring up  
[3] another picture in a minute — the  
[4] activities of the site took place right  
[5] here in the center.  
[6] This is an entrance ramp for 280,  
[7] this is a place called the Campbell  
[8] Foundry, and this is the relatively new  
[9] Wal-Mart facility. Water, surface  
[10] water, drains this way to something  
[11] called Frank's Creek, which is right  
[12] here, and Frank's Creek discharges into  
[13] the Passaic River.  
[14] Now, this land was marshlands if  
[15] you go back maybe two hundred years, and  
[16] it has slowly been filled over time.  
[17] It's generally been used as industrial  
[18] property, including the facility that we  
[19] are focussing on, and then landfills.  
[20] And the one other feature that I  
[21] will point out because we're going to  
[22] talk about it a little later is this  
[23] landfill here, which is called the 1-D  
[24] landfill. It's one of the MSLA  
[25] landfills. It's about 95 acres, and

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[1] it's just across 280 from the site.  
[2] Now we'll go one step closer and  
[3] we're on to — you can look at these  
[4] figures here or the figure up on the  
[5] board. This is a current photograph.  
[6] And by showing this piece, though, I  
[7] don't want to mislead you; this is  
[8] narrowing into a little parcel, but I  
[9] don't want to give the impression that  
[10] that's the whole of the site. That's  
[11] the whole of the subject of tonight's  
[12] meeting, but for reasons you'll see in a  
[13] minute, our investigations have gone  
[14] outside of this parcel.  
[15] This piece is about fifteen acres  
[16] on the — the facility sat right here,  
[17] on the sort of eastern edge of the lot.  
[18] And there's a number of landfill pieces  
[19] that — sort of surrounding the edges of  
[20] it now. And we'll go through some  
[21] history, and you'll learn a little bit  
[22] about those.  
[23] So, I'm going to talk about —  
[24] with regard to site history, I'll just  
[25] talk about four things: I'll talk

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[1] about, obviously, Diamond Head Oil  
[2] Refinery; the neighboring landfilling  
[3] businesses; the construction of I-280;  
[4] and then sort of the end of the Diamond  
[5] Head facility that took place in '79.

[6] So, Diamond Head Oil Refinery was  
[7] one of a number of companies that  
[8] operated up and down the eastern — the  
[9] East Coast of the United States that  
[10] were in the business of collecting waste  
[11] oil from gas stations and other places,  
[12] and then reprocessing it through some  
[13] magic into material that they could  
[14] reuse. And they — these variety of  
[15] companies, most of which were owned by  
[16] essentially one entity, would send this  
[17] waste oil to facilities like this.

[18] And here is an aerial photograph  
[19] from 1976, and here is about a four-acre  
[20] piece of land that is just a little bit  
[21] elevated that was the Diamond Head  
[22] facility, which started operating in the  
[23] 1940s and finished its run in 1979.

[24] Now, the key feature from the  
[25] point of view of this facility is,

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[1] obviously, there's lots of tanks and  
[2] businesses — the business' pieces of  
[3] equipment. They would bring in this  
[4] waste oil and they would re-refine it,  
[5] which is essentially, we think, kind of  
[6] sending it back to the refinery to sort  
[7] it out into usable components. It  
[8] seemed that most of it was going into a  
[9] kind of heating oil and then being  
[10] resold.

[11] But what I want to point out is  
[12] this black feature here, which runs  
[13] quite a bit off of that fifteen-acre lot  
[14] that you see above me. And it's  
[15] essentially a mixture of oil and water.  
[16] We call this the oil lake. It's about  
[17] — it's been estimated that it was about  
[18] six to seven acres in size.

[19] We don't know exactly how it got  
[20] there, whether they were actually  
[21] storing some of this waste oil in this  
[22] sort of open water area behind the  
[23] facility or whether it was just sort of  
[24] running out of their facility because it  
[25] was sloppy or whether possibly they

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[1] could refine certain of their waste oils  
[2] into reusable products and then they  
[3] just ended up with stuff they had to get  
[4] rid of and maybe that's what this is.  
[5] We don't really know. But, obviously,  
[6] it's gone quite a distance from the  
[7] original land.

[8] So, I'm going to also point out  
[9] one other feature here, and that is this  
[10] — I'm going to run a line right down  
[11] here, sort of top to bottom. This is  
[12] that 1-D Landfill that I mentioned  
[13] before, and this is an access road to  
[14] get up onto that landfill. There's  
[15] access roads on either end of it.

[16] And, so, this end of that  
[17] fifteen-acre lot is actually filled —  
[18] sort of a long filled area, and it's  
[19] pretty clear that this was — it was  
[20] filled with municipal waste. We've done  
[21] some test pitting, and it's pretty clear  
[22] it's filled primarily with municipal  
[23] waste, and they built it up so they  
[24] could have access to the landfill.

[25] Now, starting in 1976 and ending

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[1] a couple years later, the New Jersey  
[2] Department of Transportation began the  
[3] construction of I-280, which now fills  
[4] the southern end of our area of  
[5] interest.

[6] In 1976, they got to this part of  
[7] the site and concluded that they  
[8] actually owned quite a bit of this land  
[9] where the oil lake was. They concluded  
[10] they couldn't build on the oil lake.  
[11] They had to get rid of it, so they paid  
[12] to have it pumped out.

[13] It took about, I think, ten  
[14] months. It was somewhere in the  
[15] neighborhood of eleven million gallons  
[16] of oil and water that were removed. It  
[17] was pumped into tanker trucks and taken  
[18] to other facilities that did this sort  
[19] of waste oil business.

[20] When they got the lake pumped  
[21] out, there was a layer of kind of a  
[22] messy sludge at the bottom, and they  
[23] concluded that they couldn't build on  
[24] that either. So, that material was  
[25] scraped off. It totalled approximately

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[1] 230,000 cubic yards of material. And  
[2] from DOT's records from the time, they  
[3] redeposited it in the ground in a couple  
[4] of locations.

[5] The largest piece is actually up  
[6] on top of the 1-D landfill. There are  
[7] several other — I'll refer to this  
[8] finished picture over here. There is  
[9] this landfill piece that I mentioned  
[10] before; there may be some of that  
[11] material in here, although we haven't  
[12] seen it. And then there's something in  
[13] this right-of-way to the highway that's  
[14] actually owned by DOT that's a mound.

[15] And we've done some sampling of  
[16] it, and there is something that looks  
[17] like sludge in it, so that apparently is  
[18] where a good portion of that material  
[19] went as well. And we still have some  
[20] investigations of that material to do of  
[21] our own to figure out whether we need to  
[22] take an action with regard to that as  
[23] well.

[24] One of the comments that we've  
[25] read in DOT's records contemporaneous

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[1] with this activity was after the removal  
[2] of the oil lake and after the removal of  
[3] the sludge, they indicated that there  
[4] was still a layer of this oily petroleum  
[5] material in the ground, and it's that  
[6] material that's really the focus of our  
[7] action that we're discussing tonight.  
[8] They saw it — they called it the  
[9] underground oil lake. So, that's really  
[10] what we're focussing in on with this  
[11] action.

[12] That's about all that I wanted to  
[13] cover, except that Diamond Head, the  
[14] company, closed down in 1979. The owner  
[15] had some legal troubles about the same  
[16] time, and we think that there's some  
[17] connection between those two; the  
[18] closure and his legal troubles. And the  
[19] place was actually demolished a couple  
[20] years later, and during that — it was  
[21] really a cleanup, the first cleanup that  
[22] took place at the site.

[23] And during that work, some  
[24] environmental samples were collected,  
[25] and those environmental samples were the

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[1] first evidence that — in the record  
[2] that indicate that, in fact, what  
[3] Diamond Head was bringing to the site  
[4] wasn't just petroleum waste, it was some  
[5] other things, with PCBs and other  
[6] volatile components that were probably  
[7] getting mixed into his products, and  
[8] some of which, obviously, are — have  
[9] ended up in the ground.

[10] So, we're looking at, as a  
[11] consequence, this relatively large area  
[12] for the whole RI/FS. We're looking at  
[13] the groundwater. We have a lot of  
[14] information but need a little bit more  
[15] on the soils in the whole of this area.  
[16] And then we need to really understand  
[17] about surface water, movement of this  
[18] material over time, and whether there's  
[19] a component of that.

[20] But that's to come. Right now,  
[21] we're focussing on really this one area,  
[22] which Grisell is going to tell us about  
[23] by describing the details of the RI/FS  
[24] to date and what we found and then what  
[25] our proposal is to address it.

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[1] **MS. DIAZ-COTTO:** Good evening.  
[2] I'm going to give you a preview of what  
[3] I'll be presenting to you tonight.

[4] The first thing I'll be  
[5] discussing is the Remedial Investigation  
[6] study to date, its findings and  
[7] conclusions. Then I'll provide you with  
[8] information with regarding the principal  
[9] threat waste, the remedial objectives  
[10] for this waste, and the risks  
[11] attributable to the site.

[12] Following, I'll explain the  
[13] rationale for the remedial phases  
[14] approach that we are following for the  
[15] site. I will then proceed with the  
[16] presentation of the remedial  
[17] alternatives, the evaluation of these  
[18] alternatives, and, finally, with the  
[19] recommendation for the preferred  
[20] alternative.

[21] Let me start, however, with the  
[22] definition of a term I'll be using  
[23] throughout my presentation; LNAPL.

[24] LNAPL stands for Light Nonaqueous  
[25] Phase Liquids, which are liquids that

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[1] are sparingly soluble in water and less  
[2] dense than water. For example, oil is  
[3] an LNAPL because it flows on top of  
[4] water and does not mix with water.

[5] In 2002, EPA began a Remedial  
[6] Investigation to determine the nature  
[7] and extent of the problems posed by the  
[8] site. The Remedial Investigation  
[9] studies to date have outlined, in  
[10] addition to all the findings that I'll  
[11] be discussing later, two areas of  
[12] potential source areas where LNAPL may  
[13] be continuing to release contamination  
[14] to the environment.

[15] This area is outlined in red.  
[16] The processing section of the site, once  
[17] containing two buildings, multiple  
[18] above-ground storage tanks, as you can  
[19] see there, drum storage areas, and  
[20] possibly underground feeds. And second,  
[21] the remnants of the oil lake, estimated  
[22] in 1977 took over an area of six to  
[23] seven acres, located over the southern  
[24] section of the site and extending  
[25] outside the site's fenced boundaries to

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[1] the east and south.

[2] There is evidence of oil  
[3] contamination in nearly every boring  
[4] installed within the fifteen-acre fenced  
[5] property and in many borings to the  
[6] southeast. Because of this layer of oil  
[7] contamination across the site, the RI  
[8] studies performed to date have used a  
[9] number of different methods to document  
[10] the nature and extent of the LNAPL and  
[11] to identify the more severely  
[12] contaminated areas of the site.

[13] Using these meters, several  
[14] characteristics of the LNAPL were  
[15] established. First, LNAPL is present in  
[16] the subsurface throughout most of the  
[17] investigated area, albeit under  
[18] substantial variation and concentration  
[19] across the site.

[20] Second, LNAPL was measured in  
[21] wells in three areas of the site; one in  
[22] the former process area, and two within  
[23] the footprint of the oil lake. This  
[24] means that when the well cap is moved,  
[25] we find a thick layer of oil rather than

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[1] water.

[2] Third, the vertical distribution  
[3] of LNAPL exists at two intervals; first  
[4] at the water table approximately two  
[5] feet below ground surface, and, second,  
[6] as distinct deeper internal depths at  
[7] ten to sixteen feet below ground surface  
[8] within the silted soil. However, the  
[9] bulk of LNAPL-containing soil is located  
[10] near the water table within the filled  
[11] layer.

[12] Many of those compounds were  
[13] found in the LNAPL, including benzene  
[14] and other petroleum compounds, PCBs, and  
[15] a variety of metals. Within the LNAPL,  
[16] there are pockets of less weathered  
[17] LNAPL of a high saturation that present  
[18] a leaching concern to groundwater.  
[19] These are LNAPL areas that may be  
[20] considered to present a risk for  
[21] leaching contaminants to groundwater.  
[22] This highly contaminated material is  
[23] what we are focussing on with this  
[24] proposed action.

[25] In addition to the LNAPL findings

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[1] discussed before, the remedial  
[2] investigation found soil, groundwater,  
[3] sediment, and surface water  
[4] contamination attributable to the site.

[5] Evidence based on site-specific  
[6] data concluded that LNAPL detected at  
[7] the site was separated into areas where  
[8] LNAPL material is considered to  
[9] represent a principal threat and areas  
[10] where LNAPL can be considered to be a  
[11] lower level threat and for which  
[12] appropriate measures will be considered  
[13] in future feasibility studies.

[14] The total area of the principal  
[15] threat of LNAPL is roughly 176,000  
[16] square feet, a volume of 45,825 cubic  
[17] yards, including 2,593 cubic yards where  
[18] LNAPL floating product is found in wells  
[19] constitutes the principal threat LNAPL.

[20] Remedial action objectives, which  
[21] are a general description of what the  
[22] response action is expected to  
[23] accomplish, were developed for the  
[24] principal threat LNAPL wastes to address  
[25] the human health risks and environmental

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[1] concerns of the Diamond Head Oil Site.  
[2] The focus of this early action is  
[3] to address LNAPL that constitutes a  
[4] principal threat at the site. The  
[5] principal threat LNAPL is physically  
[6] similar to free oil product. Oil  
[7] products are toxic to ecological  
[8] receptors and humans through direct  
[9] contact, incidental ingestion, and  
[10] inhalation pathways.  
[11] Potential exposure to ecological  
[12] receptors and humans from the high  
[13] concentration LNAPL that is present at  
[14] the site could result in adverse health  
[15] effects. It is, therefore, important  
[16] that steps be taking taken to eliminate  
[17] or reduce the level of LNAPL at the  
[18] site.  
[19] Reducing or eliminating the LNAPL  
[20] at the site would reduce potential  
[21] exposure to free product, and that's an  
[22] important early step in managing the  
[23] site risk. However, it is not expected  
[24] to eliminate the overall risks and  
[25] hazards to ecological receptors or

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[1] humans because of residual contamination  
[2] that will remain on the site. This  
[3] residual contamination will be addressed  
[4] in subsequent actions and will be  
[5] accompanied by full ecological and human  
[6] health risk assessments.  
[7] In addition to removing the  
[8] potential exposure of LNAPL at the site,  
[9] reducing or eliminating the LNAPL will  
[10] also limit the potential migration,  
[11] which would aid in investigating and  
[12] selecting a remedy for the remainder of  
[13] the site.  
[14] The first operable unit has been  
[15] identified as an early action to address  
[16] a principal threat LNAPL. A second  
[17] Operable Unit will address residual soil  
[18] contamination attributable to the site,  
[19] including lower level threat LNAPL, the  
[20] on-site landfilled area, the I-280  
[21] right-of-way berms, and groundwater and  
[22] sediment contamination.  
[23] Site studies are ongoing. For  
[24] example, new groundwater monitoring  
[25] wells were installed earlier in 2009 on

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[1] a number of neighboring properties to  
[2] fully assess the extent of the  
[3] groundwater problems posed by the site.  
[4] Field investigations for the  
[5] comprehensive Remedial Investigation of  
[6] the site are expected to be complete in  
[7] 2010, at which time EPA can proceed with  
[8] evaluating remedial alternatives for the  
[9] entire site.  
[10] While further studies of the  
[11] landfill site are required, the history  
[12] of site activities and the test trenches  
[13] already installed support EPA's  
[14] conclusion that the landfill is not a  
[15] source of LNAPL.  
[16] Now let's go to the remedial  
[17] alternatives for the site.  
[18] The Superfund program requires  
[19] that the no action alternative be  
[20] considered as a baseline for comparison  
[21] for the other alternatives. The no  
[22] further action alternative does not  
[23] include any physical remedial measures  
[24] beyond those response actions already  
[25] completed that address the LNAPL

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[1] contamination at the site.  
[2] Because this alternative will  
[3] result in contaminants remaining on the  
[4] site above health-based level, CERCLA  
[5] requires that the site be reviewed every  
[6] five years. If justified by the review,  
[7] remedial actions may be implemented to  
[8] remove or treat the wastes.  
[9] The second alternative is on-site  
[10] biocell. Under this alternative, the  
[11] remedial target areas would be isolated  
[12] with a sheet pile wall and the principal  
[13] threat LNAPL areas excavated. Some of  
[14] this material would be removed for  
[15] off-site disposal. The remaining  
[16] excavated material would be augmented  
[17] with nutrients and bulking agents to  
[18] enhance permeability and the conditions  
[19] for biological activity.  
[20] The area within the sheet pile  
[21] walls would be converted into a biocell  
[22] by installing piping to supply air and  
[23] distribute nutrient additives, along  
[24] with a collection system for air and  
[25] water that may accumulate in the



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[1] biocell. The augmented LNAPL material  
[2] would be placed in the biocell for  
[3] treatment and capped.

[4] After performance sampling and  
[5] final confirmation sampling to  
[6] demonstrate that the LNAPL wastes have  
[7] been destroyed through biological  
[8] degradation, the biocell components will  
[9] be dismantled. Areas where a measurable  
[10] layer of floating LNAPL product is found  
[11] in monitoring wells may not be amenable  
[12] to effect treatment in the biocell.

[13] These areas will, therefore, be  
[14] excavated and transported for off-site  
[15] disposal.

[16] Soil washing. Under this  
[17] alternative, the remedial target areas  
[18] would be isolated with a sheet pile wall  
[19] and principal threat LNAPL areas  
[20] excavated. The excavated material would  
[21] then be treated on site using soil  
[22] washing.

[23] The excavated soils and LNAPL  
[24] wastes would be placed in a slurry  
[25] reactor vessel and combined with a

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[1] washing fluid that would wash the LNAPL  
[2] from the soil particles. This  
[3] technology requires a water treatment  
[4] facility to treat the LNAPL and  
[5] contaminants of concern in the washing  
[6] fluid so it can be reused. The treated  
[7] soil material would be tested for  
[8] compliance with the cleanup goals and  
[9] returned to the excavated areas.

[10] As with Alternative 2, areas  
[11] where a measurable layer of floating  
[12] LNAPL product is found in monitoring  
[13] wells may not be amenable to soil  
[14] washing, and this alternative assumes  
[15] that these areas will be excavated,  
[16] treated as necessary, and transported  
[17] for off-site disposal.

[18] While this alternative, like  
[19] Alternative 2, would result in  
[20] contaminants remaining within the  
[21] remedial target areas above health-based  
[22] level, this action is expected to  
[23] address the principal threat LNAPL as a  
[24] final action. A subsequent Record of  
[25] Decision will be required to make a

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[1] final determination about the underlying  
[2] constituents that will remain within the  
[3] treated soil.

[4] Therefore, the need for a review  
[5] of the site every five years will be  
[6] made at that time. If justified by the  
[7] Remedial Investigation, additional  
[8] remedial actions may be implemented to  
[9] remove or treat such wastes.

[10] The fourth alternative,  
[11] excavation and off-site disposal. Under  
[12] this one, the remedial target areas  
[13] would be isolated with a sheet pile wall  
[14] and the principal threat LNAPL areas  
[15] excavated.

[16] As with Alternatives 2 and 3,  
[17] dewatering will be required prior to  
[18] excavation, and the removal water would  
[19] need to be treated prior to discharge.

[20] The excavated material will then be  
[21] stabilized on site to allow for  
[22] transportation for off-site disposal.  
[23] The excavated areas will then be  
[24] backfilled with clean fill.

[25] Sampling would be performed

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[1] during remedial design to delineate the  
[2] extent of the remedial target areas, but  
[3] no performance monitoring would be  
[4] required. The Feasibility Study  
[5] estimates that this alternative could be  
[6] implemented in approximately one year.

[7] Nine criteria, as you see there:  
[8] Overall protectiveness of human health  
[9] and the environment; long-term  
[10] effectiveness, short-term effectiveness;  
[11] implementability; cost; and the rest.  
[12] They're used to evaluate the different  
[13] remediation alternatives individually  
[14] and against each other in order to  
[15] select a remedy. They provide profile  
[16] their relative performance of each  
[17] alternative against the nine criteria,  
[18] noting how it compares to the other  
[19] options under consideration.

[20] Once the alternatives have been  
[21] fully described and individually  
[22] assessed against the nine criteria, a  
[23] comparative analysis is conducted to  
[24] evaluate the relative performance of the  
[25] alternatives in relation to each

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[1] specific evaluation criteria.

[2] The purpose of this comparative  
[3] analysis is to identify the advantages  
[4] and disadvantages of each alternative  
[5] relative to one another so the tradeoffs  
[6] that will have to be balanced to select  
[7] a remedy are fully understood.

[8] The proposed plan that you have a  
[9] copy of outlines this process, the  
[10] process that we went through, in  
[11] selecting an alternative; however, a  
[12] full presentation of both individual and  
[13] comparative analysis of alternatives is  
[14] included in the feasibility studies for  
[15] this site.

[16] Based on this evaluation of the  
[17] various alternatives, EPA and the New  
[18] Jersey Department of Environmental  
[19] Protection recommend Alternative 2, the  
[20] on-site biocell along with excavation  
[21] and off-site disposal of the more highly  
[22] contaminated material as a preferred  
[23] alternative to address the principal  
[24] threat LNAPL.

[25] I will in a moment ask Andrew

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[1] Judd to present you with the technical  
[2] details of the preferred alternative.  
[3] However, I would like to remind you that  
[4] although this first operable unit has  
[5] been identified as an early action to  
[6] address the principal threat LNAPL, a  
[7] second operable unit for which studies  
[8] are ongoing will address residual soil  
[9] contamination attributed to the site,  
[10] including lower level threat LNAPL, the  
[11] on-site landfill area, the right-of-way  
[12] berms, and groundwater and sediment  
[13] contamination.

[14] **MR. PRINCE:** Wanda, let's have —  
[15] any parts of Andy's presentation that  
[16] come up as response to questions, we'll  
[17] have him present that.

[18] Why don't we open the floor?

[19] **MS. AYALA:** So, we'll open up the  
[20] floor to questions and comments.

[21] **MR. BARONE:** You said Alternative  
[22] 2, right?

[23] **MS. AYALA:** State your name.

[24] **MR. BARONE:** My name is Joe  
[25] Barone.

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[1] Just so I understand, Alternative  
[2] 2 is an on-site cleanup?

[3] **MR. PRINCE:** Yes.

[4] **MR. BARONE:** And then you said  
[5] there's some areas that you would send  
[6] for outside disposal.

[7] What areas would that be?

[8] **MR. PRINCE:** The material that —  
[9] the 45,000 yards that we identified that  
[10] constituted this sort of worst part of  
[11] the site, there are certain sections of  
[12] it that are essentially pure oil.

[13] And bioremediation is kind of the  
[14] standard method of dealing with  
[15] petroleum-contaminated sites. Even  
[16] though there are lots of contaminants on  
[17] this site, this action is primarily  
[18] focussing in on that flowing material or  
[19] that more highly contaminated material,  
[20] and it's a lot of petroleum.

[21] So, we think that bioremediation  
[22] or this biocell is the best fit for the  
[23] site. But because some of it is so  
[24] heavily contaminated, we think it will  
[25] actually slow the whole process down and

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[1] stretch it out a bit. So, as a way to  
[2] sort of balance that out, our plan is to  
[3] pull the worst of it out and then —  
[4] it's still a pretty large quantity, but  
[5] a relatively large quantity would then  
[6] be subject to this biocell treatment on  
[7] the site.

[8] So, how much is that? It's  
[9] probably at least that 3,000 yards of  
[10] material that's around those couple of  
[11] wells where there's literally — you  
[12] know, you open the well cap and there's  
[13] five or six feet of oil and water  
[14] because there's so much oil in the  
[15] ground there.

[16] **MR. BARONE:** And what type of  
[17] place would you send it to, a landfill?

[18] **MR. PRINCE:** It would go to a  
[19] facility — it would need to be  
[20] solidified first, because we couldn't  
[21] ship a liquid waste like that, and there  
[22] would be a component of it that would be  
[23] liquid waste. And then EPA has  
[24] regulations governing the disposal of  
[25] that sort of material.

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[1] My guess is that it might have to  
[2] go to a hazardous waste landfill and may  
[3] require treatment before it can even get  
[4] into that landfill. But we won't know  
[5] that until we actually —

[6] **MR. BARONE:** So, a TSDF first and  
[7] then to a landfill?

[8] **MR. PRINCE:** It would probably go  
[9] to Subtitle C facility that could have  
[10] the treatment component right there and  
[11] then put in the landfill. We're not  
[12] certain — there is some hot — you seem  
[13] to know something about the structure  
[14] construction of landfill.

[15] **MR. BARONE:** A little bit.

[16] **MR. PRINCE:** So, let me speak to  
[17] that.

[18] There is a possibility that you  
[19] could take this contaminated soil, ship  
[20] it to a facility off the site, have it  
[21] treated, have it meet the standards for  
[22] putting it into a Subtitle D landfill,  
[23] but that would require us to find some  
[24] off-site treatment facility, ship it  
[25] there, get it treated there, and then

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[1] send it to another place to have it  
[2] disposed of.

[3] And our experience with that  
[4] multiple step process is it makes more  
[5] sense to just send it to a place where  
[6] you could treat it and put it in the  
[7] ground right there.

[8] **MR. BARONE:** There's no concern  
[9] about metals?

[10] **MR. PRINCE:** I suspect that when  
[11] we test this material to determine what  
[12] to do with it for off-site disposal,  
[13] metals will probably not be a  
[14] determining factor.

[15] **MR. BARONE:** Thank you.

[16] **MS. AYALA:** Any other questions?  
[17] Comments?

[18] **MR. BARONE:** You said something  
[19] about PCBs.

[20] What kind of levels are we  
[21] talking about?

[22] **MR. PRINCE:** Andy, what's the  
[23] highest level of PCBs we've seen?

[24] **MR. JUDD:** Generally, low.

[25] Numerically, it's in the less than a

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[1] hundred and tens range.

[2] **MR. BARONE:** So, it's not TANSLA  
[3] regulated?

[4] **MR. PRINCE:** No, for disposal, it  
[5] wouldn't be TANSLA regulated, and for  
[6] managing the site it wouldn't require  
[7] us...

[8] **MR. JUDD:** At very few locations  
[9] also across the fifteen acres we've  
[10] evaluated; less than ten locations, I  
[11] think less than five locations we have  
[12] found PCBs.

[13] **MR. BARONE:** All right.

[14] **MR. PRINCE:** These earlier  
[15] samples that I mentioned collected in  
[16] the early eighties, when the facility  
[17] came down, there's tons of wastes that  
[18] were removed at the time, and quite a  
[19] bit of it had PCBs in it.

[20] So, it's possible that some of  
[21] them — some of the higher level  
[22] material went off at that time. We  
[23] don't know.

[24] **MR. BARONE:** That's it. That's  
[25] all I have.

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[1] **MS. AYALA:** Any other questions?  
[2] Comments?

[3] This concludes our public  
[4] meeting. Thank you for coming. Have a  
[5] good night.

[7] (Time noted: 6:48 p.m.)

[1] CERTIFICATE  
[2] STATE OF NEW YORK )  
[3] )ss.:  
[4] COUNTY OF NEW YORK )  
[5] I, LINDA A. MARINO, a Registered  
[6] Professional Reporter, Certified Court  
[7] Reporter, and Notary Public within and  
[8] for the State of New York do hereby  
[9] certify:  
[10] I reported the proceedings in the  
[11] within-entitled matter to the best of my  
[12] ability, and that the within transcript  
[13] is a true record of such proceedings.  
[14] I further certify that I am not  
[15] related, by blood or marriage, to any of  
[16] the parties in this matter and that I am  
[17] in no way interested in the outcome of  
[18] this matter.  
[19] IN WITNESS WHEREOF, I have  
[20] hereunto set my hand this \_\_\_\_\_ day of  
[21] \_\_\_\_\_ 2009.  
[22]  
[23]  
[24] LINDA A. MARINO, RPR, CCR  
[25]  
[N20]

**Lawyer's Notes**

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## Lawyer's Notes

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